IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of
DANIEL WILLEM ELISABETH SCHOBBEN ET AL.

Atty. Docket: NL 040272

Confirmation No. 1011

Serial No. 10/598,836

Group Art Unit: 2629

Filed: SEPTEMBER 13, 2006

Examiner: XIAO, KE

Title: SCANNING DISPLAY APPARATUS

Mail Stop Appeal Brief-Patents
Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

Appellants herewith respectfully present a Brief on Appeal as follows, where a Notice of Appeal is concurrently filed:

REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee of record Koninklijke Philips Electronics N.V., a corporation of The Netherlands having an office and a place of business at Groenewoudseweg 1, Eindhoven, Netherlands 5621 BA.

RELATED APPEALS AND INTERFERENCES

Appellants and the undersigned attorney are not aware of any other appeals or interferences which will directly affect or be directly affected by or having a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1-5 and 8-21 are pending in this application where claims 6-7 are canceled. Claims 1-5 and 8-21 are rejected in the Final Office Action mailed on September 28, 2009. Claims 1-5 and 8-21 are the subject of this appeal.

STATUS OF AMENDMENTS

Appellants did not file a Response to a Final Office Action mailed September 28, 2009. Appellants are concurrently filing a Response to the Final Office Action mailed September 28, 2009 that corrects the dependence of claims 8 and 10 from canceled claim 6 to claim 1, entry of which is respectfully requested. This Appeal Brief is in response to the Final Office Action mailed September 28, 2009, that finally rejected claims 1-5 and 8-21.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention, for example, as recited in independent claim 1, shown in FIGs 1-3, and described on page 3, lines 6-32; and page 7, lines 11 page 10, line 20 of the specification, is directed to a scanning display apparatus 10 comprising a display 70 operable to receive one or more driver signals and generate corresponding visual information for presentation on the display 70; and to sense radiation received at the display 70 and generate one or more sensing signals corresponding to a region proximate to the display 70. The scanning display apparatus 10 further includes computer hardware coupled to the display for generating the one or more driver signals for the display and for receiving the one or more sensing signals from the display 70, the computer hardware being operable to provide an interactive user interface at the display 70. As shown in FIGs 5-6, and described on page 11, lines 1-26, the apparatus 10 is configured to sense one or more objects when placed upon or positioned in proximity to the display 70 and obscuring at least part of the visual information displayed on the display, and to adapt the visual information for display on the

unobscured parts of the display 70 which are unobscured by the one or more objects.

The present invention, for example, as recited in claim 4, shown in FIG 2, and described on page 3, line 20 to page 4, lines 3; and page 14, line 18 to page 15, line 4 of the specification, includes the computer hardware which is operable to execute a first coarser scan to determine spatial location of the one or more objects on or in proximity of the display, and then execute a second finer scan to assimilate finer details of the one or more objects.

The apparatus of the present invention, for example, as recited in claim 8, shown in FIG 4, and described on page 4, lines 17-29; and from page 9, line 32 to page 11, lines 15 of the specification is arranged to present the user interface in squeezed format when an unobscured active region of the display 70 is insufficiently large to include all of the user interface.

The present invention, for example, as recited in claim 9, shown in FIG 4, and described on page 4, lines 17-29; and from page 9, line 32 to page 11, lines 15 of the specification, the user interface includes a scrolling feature for use in accessing squeezed parts of the user interface presented on the display 70.

In the apparatus of the present invention, for example, as recited in claim 10, shown in FIG 4, and described on page 4, lines 17-29; and from page 9, line 32 to page 11, lines 15 of the specification, a minimum display size limit for the user interface is defined in the computer hardware, such that obscuring more of the display than defined by the display size limit causes the computer hardware to present at least part of the user interface in the squeezed format.

The present invention, for example, as recited in independent

claim 11, shown in FIGs 1-3, and described on page 3, lines 6-32; and page 7, lines 11 page 10, line 20 of the specification, is directed to a scanning display apparatus 10 comprising a display 70 operable to receive one or more driver signals and generate corresponding visual information for presentation on the display 70; and to sense radiation received at the display 70 and generate one or more sensing signals corresponding to a region proximate to the display 70. The scanning display apparatus 10 further comprises computer hardware coupled to the display 70 for generating the one or more driver signals for the display 70 and for receiving the one or more sensing signals from the display 70, the computer hardware being operable to provide an interactive user interface at the display. As shown in FIGs 5-6, and described on page 4, line 30 to page 4, line 2; and page 9, line 32 to page 10, line 20, the apparatus 10 is arranged to present the user interface comprising a plurality of user interface features, and the computer hardware is provided with a priority identifier for each of the features for determining which of the features to omit from presentation in the user interface in a situation where at least part of the display is obscured.

The present invention, for example, as recited in independent claim 16, shown in FIGs 1-3 and 5-7, and described on page 3, lines 6-32; page 6, lines 11-26; page 7, lines 11 page 10, line 20; and page 14, line 16, to page 15, line 19 of the specification, is directed to a method of operating a scanning display apparatus 10 including a display 70, where the method includes receiving one or more driver signals at the display 70 and generating corresponding visual information for presentation on the display 70; and sensing radiation received at the display 70 and generating one or more corresponding sensing signals corresponding to a region proximate to the display 70. Computer hardware coupled to the display 70 generates the one or more driver signals for the display 70 and receives the one or more sensing signals from the display 70. The method further includes sensing one or more objects when placed upon or positioned in proximity to the display 70 and obscuring at least part of the visual information displayed on the display 70, and adapting the visual information for display on the unobscured parts of the display 70 which are unobscured by the one or more

objects. The computer hardware is further operable to provide an interactive user interface at the display.

The present invention, for example, as recited in claim 20, shown in FIG 2, and described on page 3, line 20 to page 4, lines 3; and page 14, line 18 to page 15, line 4 of the specification, includes the computer hardware which is configured to perform a coarse scan using ambient illumination to identify positions of the one or more objects and to perform a fine scan, which is finer than the coarse scan, to identify details of the one or more objects using illumination generated by the display.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1, 3, 4, 8-10, 12 and 14-21 of U.S. Patent Application Serial No. 10/598,836 are unpatentable under 35 U.S.C. §103(a) over U.S. Patent Application Publication No. 2002/0079512 (Yamazaki) in view of U.S. Patent Application Publication No. 2001/0020939 (Ikeda).

Whether claim 2 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda and U.S. Patent No. 5,610,629 (Baur).

Whether claim 5 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda and U.S. Patent No. 5,742,279 (Yamamoto).

Whether claim 11 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda and U.S. Patent No. 5,623,344 (Lane).

Whether claim 13 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda and WO 00/75766 (Macinnes).

ARGUMENT

Claims 1, 3, 4, 8-10, 12 and 14-21 are said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda.

Appellants respectfully request the Board to address the patentability of independent claims 1, 11 and 16 as well as dependent claims 4, 8-10 and 20, and further claims 2-3, 5, 8-10, 12-15, 17-19 and 21 as depending from claims 1, 11 and 16, based on the requirements of independent claims 1, 11 and 16. This position is provided for the specific and stated purpose of simplifying the current issues on appeal. However, Appellants herein specifically reserve the right to argue and address the patentability of claims 2-3, 5, 8-10, 12-15, 17-19 and 21 at a later date should the separately patentable subject matter of claims 2-3, 5, 8-10, 12-15, 17-19 and 21 later become an issue. Accordingly, this limitation of the subject matter presented for appeal herein, specifically limited to discussions of the patentability of claims 1, 11 and 16, and dependent claims 4, 8-10 and 20, is not intended as a waiver of Appellants' right to argue the patentability of the further claims and claim elements at that later time.

Yamazaki is directed to an information device with a pen input function. Ikeda is directed to an electronic instrument which can reduce its power consumption. In rejecting claim 6, on page 4, second full paragraph of the Office Action, FIGs 35-38 of Ikeda are cited to allegedly show adapting "the visual information for display on the unobscured parts of the display which are unobscured by the one or more objects," as currently recited in independent claims 1 and 16.

It is respectfully submitted that FIGs 35-38 of Ikeda merely show displaying **different** information on unobscured parts of the display, such as shown in FIGs 37A-37B. Further, as shown in FIGs 36A-36B, information that are obscured are simply not shown, and what is shown is the information that are not obscured. In particular, FIG 36B shows 7 words, and when the bottom 4 words are obscured as shown in FIG 36A, then only the remaining top 3 words remain visible. The visible top 3 words are not adapted or changed. Rather, the visible top 3 words displayed on the small screen, shown in FIG 36A, look exactly the same at the ones displayed on the large screen shown in FIG 36B.

In stark contrast, the present invention as recited in

independent claim 1, and similarly recited in independent claim 16, amongst other patentable elements recites (illustrative emphasis provided):

> wherein the apparatus is configured to sense one or more objects when placed upon or positioned in proximity to the display and obscuring at least part of **the** visual information displayed on the display, and to **adapt the** visual information for display on the unobscured parts of the display which are unobscured by the one or more objects.

Adapting and displaying **the very same** visual information on unobscured parts of the display is nowhere disclosed or suggested in Yamazaki, Ikeda, and combination thereof. Rather, FIGs 37A-37B of Ikeda show displaying **different** information on unobscured parts of the display, and FIGs 36A-36B show the same top 3 words **without any change** of these top 3 words (namely, ave, avenge, avenue). These top 3 words of ave, avenge, avenue are **NOT adapted**, but rather are displayed exactly the same way in both the small and large screen of FIGs 36A-36B. Stated differently, the 4 bottom words of 'aver, average, avernus, averse' are NOT adapted to be displayed on the small un-obscured part of the screen. Rather, these 4 bottom words are simple obscured and not displayed at all. Adapting the very same visual information that are displayed when

not obscured, so that the very same visual information is displayed on the unobscured parts of the display when it is obscured, is nowhere disclosed or suggested in Yamazaki, Ikeda, and combination thereof.

Accordingly, it is respectfully submitted that independent claims 1 and 16 are allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 2-5, 8-10, 12-15 and 17-21 are also allowable at least based on their dependence from amended independent claims 1 and 16.

In addition, Yamazaki, Ikeda, and combination thereof, do not disclose or suggest that a user interface is presented in a "**squeezed format** when an unobscured active region of the display is insufficiently large to include all of the user interface," as recite in claim 8, and similarly recited in claims 9-10. (Illustrative emphasis provided) Ikeda does not even disclose or suggest adapting any information, let alone disclosing or suggesting that information is squeezed for display on unobscured part of the display. In Ikeda, when part of the display is obscured, nothing happens to the information; rather, part of the

information which is unobscured (e.g., 3 top words in FIG 36A-36B) remains visible in the **same format**, and part of the information which is obscured (e.g., 4 bottom words in FIG 36B) is simply not visible.

Further, in the paragraph spanning pages 4-5 of the Final Office Action, it is alleged that paragraph [0291] of Yamazaki discloses the features of claim 4. Applicants respectfully disagree and submit that paragraph [0291] of Yamazaki specifically recites:

> Further, the period for reading in one screen of the sensor portion is generally equal to or longer than one frame period of the EL display portion. Light is therefore irradiated intermittently to the pen tip of the input pen from pixels in the vicinity of the location indicated by the pen tip of the input pen during a period of time whose length corresponds to the sum of the subframe periods during which the EL elements emit light within the period for reading in one screen of the sensor portion. Light can therefore be input to the photodiodes of the pixels in the vicinity of the location indicated by the pen tip of the input pen by using this irradiated light. (Emphasis added)

By Contrast, claim 4 recites, with similar recitations in claim 20 (illustrative emphasis provided):

> wherein the computer hardware is operable to execute a first coarser scan to determine spatial location of the one or more objects on or in proximity of the display, and then execute a second finer scan to assimilate finer details of the one or more objects.

The noted section, namely, paragraph [0291] of Yamazaki has nothing to do with coarse or fine scanning as recited in claim 4. It is alleged in the Response to Arguments section of the Final Office Action, on page 11, second full paragraph, lines 2-7 that:

> Yamazaki clearly states that light is irradiated intermittently to the pen tip of the input pen from the pixel in the vicinity of the location indicated by the pen tip. This is the coarse reading, because only pixel in the vicinity but there is no indication of the exact pixel, however the fine reading is the actual reflection of the light from the pen back to the pixel which in turn defines the position of the pen.

Appellants respectfully disagree with the above interpretation of paragraph [0291] of Yamazaki. Paragraph [0291] merely recites to irradiate light intermittently to the pen tip of the input pen from pixels in the vicinity of the location indicated by the pen tip.

Even assuming, arguendo, that the above interpretation of paragraph [0291] of Yamazaki has some merit, just because light is

irradiated intermittently to the pen tip from a pixel in the vicinity of pen tip, without knowing the exact pixel, does not make the scan coarse. Similarly, just because the actual reflection from the pen back to the pixel is used, does not make the scan a finer scan. One can scan the vicinity with a fine scan and determine the actual pixel with a coarse scan. That is, scanning the vicinity does not necessarily make the scan coarse, and scanning the actual pixel does not necessarily make the scan fine.

On its face, without using impermissible hindsight, paragraph [0291] of Yamazaki does not even disclose or suggest using coarse or fine scans, let alone disclosing or suggesting to "execute a first coarser scan to determine spatial location of the one or more objects on or in proximity of the display, and then execute a second finer scan to assimilate finer details of the one or more objects," as recited in claim 4, and similarly recited in claim 20. (Illustrative emphasis provided)

Even if somehow Yamazaki discloses an initial coarse scan and then a fine scan, Yamazaki still does not disclose or suggest that the "coarse scan [is performed] using ambient illumination", as recited in claim 20. (Illustrative emphasis provided)

Accordingly, it is respectfully submitted that claims 4 and 20 are allowable, and allowance thereof is respectfully requested.

Claim 2 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda and Baur.

It is respectfully submitted that claim 2 should be allowed at least based on its dependence from independent claim 1.

Claim 5 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda and Yamamoto.

It is respectfully submitted that claim 5 should be allowed at least based on its dependence from independent claim 1.

Claim 11 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda and Lane.

On pages 8-9 of the Final Office Action, the Examiner correctly noted that Yamazaki and Ikeda do not disclose or suggest providing "a priority identifier for each of the features for determining which of the features to omit from presentation in the user interface in a situation where at least part of the display is

obscured," as recited in independent claim 11. Column 30, lines 5-17 of Lane is cited in an attempt to remedy the deficiencies in Yamazaki and Ikeda. Applicants respectfully disagree and submit that Lane specifically recites on column 30, lines 5-17:

> The sub-set of video header data listed as being assigned to priority level 1 in the above prioritization list associated with the prioritizer 104, is essential for the decoding of a picture. Accordingly, this data is assigned to the highest possible priority level by the prioritizer 104. The sub-set of video header data listed as being assigned to priority level 2 is necessary for the decoding of large sections of a picture and is therefore assigned to the second highest priority level. However, if the image to be reproduced during trick play operation is cropped, e.g., because of data constraints, some data assigned to priority level 2 would be unnecessary as it corresponds to the cropped regions and should be assigned to a very low priority level. (Emphasis added)

That is, first, an image is cropped and, then, priority of the data associated with the cropped image is downgraded to "a very low priority level."

In stark contrast, the present invention as recited in independent claim 11, amongst other patentable elements recites (illustrative emphasis provided):

> the apparatus being arranged to present the user interface comprising a plurality of user interface

> features, the computer hardware being **provided** with a priority identifier for each of the features **for determining which of the features to omit** from presentation in the user interface in a situation where at least part of the display is obscured.

Providing priority identifiers **for determining** which of the **features to omit** from presentation is nowhere disclosed or suggested in Yamazaki, Ikeda, Lane and combination thereof. Rather, Lane discloses downgrading or assigning low priority to **already** cropped images, and is completely silent about using priority identifiers to determine what to crop.

Accordingly, it is respectfully submitted that independent claim 11 is allowable, and allowance thereof is respectfully requested.

Claim 13 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda and Macinnes.

It is respectfully submitted that claim 13 should be allowed at least based on its dependence from independent claim 1.

In addition, Appellants deny any statement, position or averment of the Examiner that is not specifically addressed by the

foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, Appellant reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

Claims 1-5 and 8-21 are patentable over Yamazaki, Ikeda, Baur, Yamamoto, Lane and Macinnes.

Thus, the Examiner's rejections of claims 1-5 and 8-21 should be reversed.

Respectfully submitted,

By _____
Dicran Halajian, Reg. 39,703
Attorney for Appellants
December 1, 2009

THORNE & HALAJIAN, LLP
Applied Technology Center
111 West Main Street
Bay Shore, NY 11706
Tel: (631) 665-5139
Fax: (631) 665-5101

CLAIMS APPENDIX

1.(Previously Presented) A scanning display apparatus comprising:

(a) a display operable:

(i) to receive one or more driver signals and generate corresponding visual information for presentation on the display; and

(ii) to sense radiation received at the display and generate one or more sensing signals corresponding to a region proximate to the display; and

(b) computer hardware coupled to the display for generating the one or more driver signals for the display and for receiving the one or more sensing signals from the display, the computer hardware being operable to provide an interactive user interface at the display;

wherein the apparatus is configured to sense one or more objects when placed upon or positioned in proximity to the display and obscuring at least part of the visual information displayed on

the display, and to adapt the visual information for display on the unobscured parts of the display which are unobscured by the one or more objects.

2.(Previously Presented) The apparatus according to claim 1, the apparatus being arranged to identify positions of the one or more objects placed in proximity of the display by way of ambient illumination to the apparatus obscured by the one or more objects.

3.(Previously Presented) The apparatus according to claim 1, wherein the display is operable to generate light radiation for illuminating the one or more objects placed in proximity to or on the display, and also for receiving at least part of the light radiation reflected from the one or more objects so as to enable the apparatus to assimilate a scanned image of the one or more objects.

4.(Previously Presented) The apparatus according to claim 1, wherein the computer hardware is operable to execute a first coarser scan to determine spatial location of the one or more

objects on or in proximity of the display, and then execute a second finer scan to assimilate finer details of the one or more objects.

5.(Previously Presented) The apparatus according to claim 4, wherein the computer hardware is operable to present a representation of the one or more objects in a region of the display in which the one or more objects were placed during scanning as confirmation of successfully completed scanning.

Claims 6-7 (Canceled)

8.(Previously Presented) The apparatus according to claim 6, arranged to present the user interface in squeezed format when an unobscured active region of the display is insufficiently large to include all of the user interface.

9.(Previously Presented) The apparatus according to claim 8, wherein the user interface includes a scrolling feature for use in accessing squeezed parts of the user interface presented on the

display.

10. (Previously Presented) The apparatus according to claim 6, wherein a minimum display size limit for the user interface is defined in the computer hardware, such that obscuring more of the display than defined by the display size limit causes the computer hardware to present at least part of the user interface in a squeezed format.

11. (Previously Presented) A scanning display apparatus comprising:

(a) a display operable:

(i) to receive one or more driver signals and generate corresponding visual information for presentation on the display; and

(ii) to sense radiation received at the display and generate one or more sensing signals corresponding to a region proximate to the display; and

(b) computer hardware coupled to the display for generating the one or more driver signals for the display and for receiving

the one or more sensing signals from the display, the computer hardware being operable to provide an interactive user interface at the display;

the apparatus being arranged to present the user interface comprising a plurality of user interface features, the computer hardware being provided with a priority identifier for each of the features for determining which of the features to omit from presentation in the user interface in a situation where at least part of the display is obscured.

12. (Previously Presented) The apparatus according to claim 1, wherein the computer hardware in conjunction with the display is operable to identify the one or more objects in proximity to or in contact with the display and invoke one or more corresponding software applications for executing in the computer hardware in response to placement of the one or more objects.

13. (Previously Presented) The apparatus according to claim 12, wherein the one or more software applications are operable to generate one or more animated icons on the display which appear in

surrounding spatial proximity to the one or more objects placed on the display, thereby providing a visual acknowledgement that the computer hardware has identified presence of the one or more objects.

14. (Previously Presented) The apparatus according to claim 1, wherein the display comprises one or more pixel devices capable of both:

(a) generating or transmitting illumination; and

(b) sensing illuminating incident thereupon, the one or more pixel devices being fabricated using one or more of:

(c) liquid crystal display devices with associated thin-film-transistors configured to function as a light sensor; and

(d) polyLED technology.

15. (Previously Presented) The apparatus according to claim 1 adapted for use in one or more of the following applications:

(a) a contact type scanner;

(b) webtables;

(c) interactive tables;

(d) automatic vending machines control panels;

(e) security access panels;

(f) interactive control panels in vehicles;

(g) electronic design drawing boards;

(h) interactive advertisement or information displays;

(i) childrens' interactive toys and games;

(j) teaching aids;

(k) television monitors; and

(l) computer monitors.

16. (Previously Presented) A method of operating a scanning display apparatus including:

(a) a display, wherein the method includes acts of:

(i) receiving one or more driver signals at the display and generating corresponding visual information for presentation on the display; and

(ii) sensing radiation received at the display and generating one or more corresponding sensing signals corresponding to a region proximate to the display; and

(b) in computer hardware coupled to the display, generating

the one or more driver signals for the display and receiving the one or more sensing signals from the display, sensing one or more objects when placed upon or positioned in proximity to the display and obscuring at least part of the visual information displayed on the display, and adapting the visual information for display on the unobscured parts of the display which are unobscured by the one or more objects, the computer hardware being operable to provide an interactive user interface at the display.

17. (Previously Presented) The method according to claim 16, further comprising an act of using pixel devices of the display to generate light radiation for illuminating the one or more objects placed in proximity to or on the display, and also for receiving at least part of the light radiation reflected from the one or more objects so as to enable the apparatus to assimilate a scanned image of the one or more objects.

18. (Previously Presented) The scanning display apparatus of claim 1, wherein the visual information is adapted so that all the visual information are displayed on the unobscured parts.

19. (Previously Presented) The scanning display apparatus of claim 1, wherein the computer hardware is configured to form a halo surrounding a footprint of the one or more objects to provide an indication of sensing the one or more objects, and wherein the computer hardware is configured to remove the halo upon removal of the one or more objects from the proximity of the display.

20. (Previously Presented) The scanning display apparatus of claim 1, wherein the computer hardware is configured to perform a coarse scan using ambient illumination to identify positions of the one or more objects and to perform a fine scan, which is finer than the coarse scan, to identify details of the one or more objects using illumination generated by the display.

21. (Previously Presented) The scanning display apparatus of claim 1, wherein the computer hardware is configured to determine an identity of a user from detection of the one or more objects, and to present preferred visual information preferred by the user.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None